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ABSTRACT

This report makes recommendations to the Arizona Department of Education for a state evaluation of Career Ladder programs. To develop this evaluation plan, prior evaluation efforts related to Career Ladders in Arizona were studied, and Career Ladder directors and program administrators from school districts across Arizona were interviewed. Evaluation recommendations based on these findings are proposed in the areas of student achievement, teacher professionalism, and district compensation. The specific recommendations include: (1) time-series design on student achievement in Career Ladder districts; (2) caution in the use and interpretation of value-added assessments for Career Ladder comparisons; (3) a survey of teacher professionalism in Career Ladder districts; (4) nominations of the best teachers in Career Ladder schools; (5) narratives of exemplary Career Ladder teachers; and (6) evaluation of district compensation plans. These recommendations could be implemented immediately or phased in over 3 years, with priority given to teacher professionalism in year 1, student achievement in year 2, and district compensation in year 3. Four appendixes contain the administrator interview protocol, a list of interview participants, teacher community and teacher professionalism scales, and a rationale for measuring teacher professionalism. (Contains 15 references.) (SLD)

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ED 437 424

GUIDELINES, RATIONALES, AND RECOMMENDATIONS FOR A STATE EVALUATION OF CAREER LADDER PROGRAMS IN ARIZONA SCHOOLS

Arnold Danzig

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June 30, 1999

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Any mistakes, errors, or inaccuracies in this work are solely the responsibility of the author.

Arnold Danzig
June 1999

Section 1

Executive Summary

This research makes recommendations to the Arizona Department of Education for a state evaluation of Career Ladder programs. In order to develop an evaluation plan, the research investigated prior evaluation efforts related to Career Ladder in Arizona. Career Ladder directors and program administrators from school districts across the state were interviewed, in person and on the telephone, individually and in-groups (see Appendix A). Additional interviews, meetings, and conversations were held with members of the Career Ladder Advisory Committee and Career Ladder Network, evaluation directors of local school districts, legislators, and ADE staff. The research also identified and analyzed existing accountability reports from local districts and other student assessment documents, which have been used to understand and document student achievement and program effectiveness.

Evaluation recommendations are proposed three areas: 1) student achievement, 2) teacher professionalism, and 3) district compensation. The specific recommendations include:

- Recommendation #1 — Time-series design on student achievement in Career Ladder districts.
- Recommendation #2 — Caution in the use and interpretation of value-added assessments for Career Ladder comparisons.
- Recommendation #3 — Survey of Teacher Professionalism in Career Ladder districts.
- Recommendation #4 — Nominations of best teachers in Career Ladder schools.
- Recommendation #5 — Narratives of exemplary Career Ladder teachers.
- Recommendation #6 — Evaluation of district compensation plans.

These recommendations can be implemented immediately or phased in over the next three years, with priority given to teacher professionalism in Year One, student achievement in Year Two and district compensation in Year Three.

Section 2 — Research Findings and Guidelines

Introduction

The goal of this research is to make recommendations to the Arizona Department of Education for a multi-year state evaluation of Career Ladder programs. In order to develop an evaluation plan, the researcher interviewed Career Ladder directors and program administrators from school districts across the state, in person and on the telephone, individually and in groups (see Appendix C). Additional interviews, meetings, and conversations were held with members of the Career Ladder Advisory Committee and the Career Ladder Network, evaluation directors of local school districts, legislators, and ADE staff. The research also identified and analyzed existing accountability reports from previous state evaluations, local district reports, and other evaluation documents, which have been used to understand and document Career Ladder effectiveness.

1. Legislation

According to the enabling legislation ARS 15-918 (Arizona Department of Education, 1997), the Career Ladder program is defined to mean:

> *E. For purposes of this article:*
>
> *1. "Career Ladder Program" means a program which:*
> *(a) Establishes a multilevel system of teaching positions.*
> *(b) Provides opportunities to teachers for continued professional advancement.*
> *(c) Requires at least improved or advanced teaching skill for advancement to a higher level and other components such as additional higher level instructional responsibilities and demonstration of pupil academic progress.*
> *(d) Uses a performance based compensation system.*

An **Additional Incentive Component** based on provisions in SB 1169 (Chapter 193 - adopted April 24, 1997) was approved by the State Board of Education on May 19, 1997; the provisions of the additional incentive component included

- That all requirements of the main career ladder program be maintained including the majority of the district's career ladder budget. Up to 49% of the (Career Ladder) budget may be used for the additional incentive component program and a minimum of 51% shall be used to support performance-based compensation for individual teachers.
- That there be a detailed description of all program components including integration with the main career ladder program, support of both district and career ladder goals, a yearly November 1st performance assessment plan, an implementation timeline and incentive goals focusing on reaching maximum school potential and enhanced student achievement.
- That parental quality rating be conducted by the district and include questions relating to student achievement;
- That there be a separate budget and expenditure report. (Arizona Department of Education, 1997, p.7):

While there are other provisions to the legislation, these sections provide the rationale for the development of Career Ladder programs in Arizona.

2. Current and Previous Evaluations Related to Career Ladder

The Arizona Department of Education (1998) surveys Career Ladder districts on teachers' and administrators' perceptions of the program. The survey consists of twenty questions grouped into three categories: 1) teacher professionalism, 2) student achievement, and 3) general benefit to teachers and students. The survey questions use a likert-type scale (Strongly Agree, Agree, No Opinion, Disagree, Strongly Disagree) to measure the attitudes and perceptions of respondents. In 1997, almost 4000 teachers and 280 administrators in twenty-six Career Ladder districts completed the survey with approximately 70% return rate. Results from both the 1997 and 1998 survey administrations report highly favorable attitudes towards Career Ladders from both

teachers and administrators in Career Ladder Programs (slightly higher for administrators than for teachers). For example, the 1998 survey results indicate that between 64% and 87% of teachers answered *Strongly Agree* or *Agree* to all twenty positively worded questions concerning Career Ladder Programs.

Earlier efforts to evaluate Career Ladder programs are reported in Packard and Dereshiwsky (1990). They collected anecdotal information from Career Ladder participants' who were given a list of 24 focus and support factors and asked to write at least one positive comment concerning the effects of the Career Ladder program upon that area (p. 16). They documented positive outcomes for Career Ladder programs in many areas including: 1) student achievement, 2) curriculum and instruction, and 3) teacher skills development and leadership (Packard and Dereshiwsky, 1990, pp. 39-46).

Their findings included the following:

Student Achievement and Production Outcomes

- Increased ability to document pre- and post-tests, and to assess associated gain scores.
- Increased ability to define measurable outcomes in "hard to-quantify areas (e.g., art, music, physical education).
- Greater emphasis on student achievement document in teacher's action plans.
- Increased documentation of standardized test results.
- Greater satisfaction, self-pride, and sense of accomplishment relative to student achievement gain-score assessment.

Curriculum/Instruction/Student Achievement Measurement

- Tangible, ongoing curriculum alignment with district objectives.
- Creation of locally developed assessment tools.
- Increased focus on higher quality content, skills, classroom materials and instructional strategies.
- Heightened teacher and administrator awareness of overall importance of sound curriculum development.

Teacher Skills Development & Leadership

- Emergence of "teacher leaders."
- Increased professionalism.
- Improved peer coaching.
- Year-round inservice opportunities.
- Teacher skills development with respect to: a) planning, b) instruction, c) interpersonal skills, and d) human growth and development.

Packard and Dereshiwsky (1990) also reference a number of other studies concerning the impact of Career Ladders on teacher performance and student achievement (p. 51). One study (cited as Helmstadter/Walton-Braver) reported a 150% increase in Phase I Career Ladder school districts' impact on student achievement (compared to non-CL districts in the state) on basic skills tests in reading, language and math. A Sunnyside School District study (cited as Fimbres) reported student performance higher in classes taught by Career Ladder teachers. An Apache Junction School District study (cited as Nine) showed students taught by Career Ladder teachers placing at higher levels of the ladder scored higher on nationally normed tests of reading, language, and math skills. A Mesa School District study (cited as Dickson, DeGracie, & Guy) reported that students in classes taught by Career Ladder teachers achieved higher than students in classes taught by non-Career Ladder teachers. However, while the narrative discussion was all favorable, additional information and analysis would be necessary to make a stronger claim for program effects. Quantitative data (Means, S.D., gain scores) were not included in the study and selection effects of teachers and districts were not discussed.

Far West Laboratory Study in 1989

Far West Laboratory's evaluation of Career Ladder Compensation Plan in Peoria (1989) also points to a belief by teachers and administrators that Career Ladder has very

positive impacts on student achievement. However, it stops short of trying to connect student achievement to the Career Ladder Plan.

> In the past, when policymakers and educators have attempted to attribute increased student achievement to unique program effects, they have generally been discredited. There are simply not enough reliable controls to allow researchers to isolate the unique effects of a particular program from a host of other factors that influence student academic achievement (p. 23).

Instead, the Report claims that "teachers and administrators believe there are very positive impacts on student achievement as a result of the Plan" (p. 23). They attribute this belief to five aspects of Career Ladder Plan: 1) increased attention to sequenced instruction, 2) better teacher organization for instruction, 3) attention to higher order thinking skills, 4) preparation of better curriculum materials, and 5) general strengthening of schools instructional programs.

Career Ladder Program Evaluation—FY 1992-93 by Datasphere

Datasphere Inc. did a program evaluation of Career Ladder in 1992-93 using a survey (89 questions) with likert-type scaled questions and open-ended questions. The survey was distributed to four groups: school board members, administrators, career ladder teachers, and non-career ladder teachers. There was no attempt to quantify the impact of Career Ladder on student achievement or performance. Rather, the evaluation reported on the perceptions of the four education constituencies, with comparisons within and between districts.

Some of the questions related to student achievement. For example, three questions asked about the role of student progress requirements in fostering teacher improvement. Another cluster of questions looked at perceptions concerning the impact of the Career Ladder Program on student progress and achievement:

(Q45) commitment to accountability for student progress,
(Q46) student assessment measures reflect student learning,
(Q47) extent of impact on student progress,
(Q48) ways the program has impacted student achievement (open-ended response), and
(Q49) likelihood of continued positive impact on student progress in the future.

The report recommended increasing publicity related to Career Ladder programs ("Let's Talk about the Best Kept Secret in Town") and demythologizing the Career Ladder program to possible participants and to the public. The report also found major differences in the philosophy of career ladder and non-career ladder teachers towards performance based pay. Finally, there was also a recommendation to survey parents. Overall, the report claimed that "the Career Ladder Program appears to help professionalize the career of teaching" (p. 62).

Arizona Department of Education Study in 1994 — *Measures of Student Achievement and Related Outcomes in Group 1 Career Ladder School Districts*

Sloat (1994) examined student achievement in the original 14 Group 1 Career Ladder districts. He then compared student achievement in Career Ladder and non-Career Ladder districts grades K-6, ASAP data grades 3 and 8, and high school and graduation rates for grades 9-12. The report looked at differences in student achievement of K-6 students taught by Career Ladder and non-Career Ladder teachers within the fourteen Group 1 Career Ladder districts. Lastly, it compared the expected versus actual achievement test scores for students adjusted on the basis of at-risk status.

To compare student achievement in the classrooms of Career Ladder and non-Career Ladder teachers, Sloat used 1990 ITBS scores from the 86,361 K-6 students in the fourteen Career Ladder districts of which 24,699 or 28.6% received instruction from

Career Ladder teachers. In twelve of the fourteen Career Ladder districts, the students receiving instruction from teachers participating in Career Ladder programs had higher achievement than K-6 students receiving instruction from non-Career Ladder teachers. According to Sloat "across all districts, the NCE score for students receiving instruction from Career Ladder teachers was 1.7 percent higher than the NCE score for students in non-CL classrooms (1994, p. 10). In essence, students in classrooms taught by Career Ladder teachers had 1.7 percent higher NCE scores that students in classrooms with non-Career Ladder teachers. There was no control for the selection effect of teachers who chose to participate in Career Ladder programs.

Using definitions from an earlier state report on the at-risk status of students, Sloat (1994) identified five of the fourteen districts to be **at-risk districts** and nine of the fourteen Group 1 Career Ladder districts to be **not at-risk districts**.

<u>At-Risk Districts</u>

Dysart
Sunnyside
Window Rock
Ganado
Creighton

<u>Non At-Risk Districts in the Study</u>

Apache Junction
Catalina Foothills
Cave Creek
Flowing Wells
Kyrene
Litchfield
Mesa
Peoria

The Report then compared these fourteen Career Ladder districts with all non-Career Ladder districts across the state. Sloat (1994) found that the Career Ladder districts outperformed the non-Career Ladder districts in four areas:

1) dropout rate — Ranges from 0.04% to 1.86% **lower dropout** in CL districts between 1985-86 and 1991-92;
2) graduation rate — 6% **higher graduation** for CL districts in 1991 and 10% higher 1992;
3) ITBS Composite NCE Scores — 7.95% **higher Composite NCE Scores** in CL districts 1988, 8.14% higher in 1990, and 9/10% higher in 1991.
4) 1993 ASAP Average Scores — Ranges from 4.67% to 5.81% **higher Grade 8 Average ASAP Scores** in 1993 Reading, Mathematics, and Writing assessments.

Quite fairly, Sloat (1994) cautions readers that the 14 Career Ladder districts used in the analysis were generally less at-risk, had lower percentages of students eligible for free and reduced lunch, contained lower percentage of LEP students, had higher median family incomes and median housing values, and contained a lower proportion of minority students. Without adjusting students' outcomes and achievement data based on these factors, it would be incorrect to attribute the more favorable results to Career Ladder status. These factors, largely associated with the relative advantages that some children bring to school compared to other children, would need to be added to the analysis in order for any meaningful interpretation of student achievement scores to be made.

There were two other comparisons of students in Career Ladder and non-Career Ladder districts. In one analysis, the differences in ITBS Complete Composite Weighted Average NCE scores were compared for students in Career Ladder and non-Career Ladder districts in 1986 (before Career Ladder) and 1991 (after implementation). Students in non-Career Ladder districts performed lower across all subject areas (reading, language and math) in 3rd and 6th grades **both before and after** Career Ladder programs were

implemented. Somewhat disheartening for those trying to build a case for the impact of Career Ladder on student achievement was the fact that the distance or percent difference in NCE scores was greater in 1991 at only three of the six data points (reading, language, and math, grade 3 and grade 6). In other words, at half of the grade level/subject areas points measured, the difference between Career Ladder and non-Career Ladder districts was less in 1991 (after Career Ladder implementation) than it had been in 1986 (before implementation).

Finally, Sloat (1994) compared the actual and predicted students NCE scores for the 86,357 students in the 14 Career Ladder districts with the 188, 653 students in non-Career Ladder districts in the state. Scores were adjusted on the basis of selected at-risk indicators. This analysis shows that students in non-Career Ladder districts scored slightly above predicted scores (.417 NCE points higher than predicted) and students in Career Ladder districts scored even higher (1.45 NCE points higher than predicted). This supported the view that students in Career Ladder districts performed at higher than expected levels although so did students in non-Career Ladder districts. It is less clear whether these results can be attributed to program effects, flaws in the at-risk model adjustment or to selection factors. While the Report was generally favorable to Career Ladder programs, its findings and utility were limited for those wishing to build a case for or against Career Ladder programs.

Other Attempts at Reporting and Interpreting of Student Achievement Data in Arizona

Behrens (1997) re-analyzed statewide student achievement data to construct a picture comparing student achievement at schools in Kyrene School District to other schools inside and outside the district. Behrens constructed a ranking of the at-risk status

of all school districts in Arizona based on measures of risk including 1) proportion of students who qualify for free and reduced lunch, 2) absence rate, 3) mobility rate into the district, 4) proportion of students with limited English proficiency. A statistical regression model was developed to predict average student achievement, with predicted achievement scores for the Kyrene schools reported along with their actual achievement scores, and the discrepancy between the two. Comparison schools were identified for each Kyrene School and for each set of comparison schools, achievement test scores in reading, language arts, and mathematics were presented along with their deviation from the target Kyrene School (p. 1).

Behrens (1997) cautions readers to consider that the data used in his study occurs at the school level and differences across grades or classrooms cannot be assessed in the analysis. An average scoring school may have quite high performance in some grades and lower performance at other grade levels balancing out to an average performing school. And depending on the time a student has been at a particular school, test outcomes may be more indicative of feeder schools than the actual schools in question. Behrens cautions "the report paints with a broad brush that may be useful in determining areas for future focus and possible concern. It should not be used alone for direct evaluative purposes" (p. 2).

Behrens (1997) reports the rankings of districts on the sum of four risk related variables (1) proportion of students who qualify for free and reduced lunch, 2) absence rate, 3) mobility rate into the district, 4) proportion of students with limited English proficiency. Each of the variables was transformed to a Z-score to provide for a common scale, and the four variables were summed to create a new variable that ostensibly

indicates risk level for students in the district. A criticism of this approach is that it assumes equal importance to the four variables

Behrens then constructs a regression model to predict average SAT-9 performance at the school level. He suggests that examination of the R-squared associated with the model indicates that the statistical analysis explained 71% of the variation in the achievement test results which he considered to be a very good level of prediction. His results indicate "all variables but the mobility variable are strongly related to the achievement scores and provide substantial information for helping predict achievement, even when the correction among these variables is taken into account. The value of income for predicting achievement is approximately twice that of LEP and absence rate" (p. 14).

Behrens found differences between actual and expected achievement varied from 6.7 percentile points above expected performance to 7.3 percentile points below expected achievement in Kyrene schools. Behrens cautions that his model is not intended to explain the discrepancy, but only point to where they exist and propose where there is a large negative discrepancy (schools performing at less than the predicted level), more detailed analysis and assessment should be accomplished. These predicted values were a rough guess of a how a school should perform. Small differences may be the result of sampling or statistical error. Larger differences may be the result of many factors including systematic differences in the students, ceiling effects of exams, or differences in instruction.

Interpreting Behrens' findings are difficult. In one table, he compares each school with a matched set of schools. For example, Table 2, on p. 15 reports that KYRENE DE

LA COLINA School's actual scores are 1.3 percentile points higher than the predicted scores (based on mobility, absence rate, LEP and low income status). However, when compared with a number of matched non-Kyrene schools, the proportion of schools that KYRENE DE LA COLINA SCHOOL surpassed in reading was 18% (3rd lowest out of 12 schools), 0% in language (lowest among the twelve schools compared) and 36% in math (5th lowest out of 12 schools compared). So what does it mean when KYRENE DE LA COLINA SCHOOL achieved higher than predicted but lower than majority of comparison schools? Is it doing better or worse than expected? The concern is how difficult, and arbitrary these comparisons and rankings appear to be in making any sensible meaning from the data that would be useful to program development or program accountability. And the potential for misinterpretation of data is great.

Arizona Charter School Progress Evaluation (1999)

The last report to be discussed is the Charter School Evaluation prepared the Morrison Institute for Public Policy (Mulholland, 1999). As with Career Ladder, a central purpose of charter schools is to improve student achievement. The Progress Evaluation has a section entitled Student Achievement Data that compares 1997 and 1998 Stanford Achievement Test (SAT 9) data of Arizona charter schools with regular schools. According to the author, student records were grouped according to one of four categories based on whether the student attended a charter or public school in 1997 and/or 1998: 1) student attended a charter school 1997 and regular school 1998, 2) attended a regular school in 1997 and charter in 1998; 3) attended a charter school in both 1997 and 1998; and 4) attended regular public schools in both 1997 and 1998. According to the report, "each group's average NCE score was calculated at each grade for reading, language, and

mathematics batteries of the SAT 9 from 1997 to 1998. Gain scores from 1997 to 1998 were then calculated for each grade level transition. Next, a series of Analysis of Variance (ANOVA) computations were conducted to assess the degree to which differences in group average gains are considered statistically significant or likely to be due to simple random fluctuation" (p. 29).

The results, presented in six different Figures (5.1-5.6) and accompanying text are not easy to interpret. The reader is told that the 1997 charter group made greater gains at some levels and in some subject areas than other groups, but the 1998 charter group showed the lowest gain. No explanations are given for this, though selection seems the most obvious explanation. To the casual reader, the analysis of student achievement data appear to be a mishmash of random fluctuations with no predictable outcomes, no control for intake variables, and no consistent patterns of student achievement across groups, subject areas, or grade levels. Later on in the Report, the reader is told:

> The analysis of student achievement as measured by SAT 9 test scores provides some indication of student progress in charter schools, but raises more questions than it answers. Overall, based upon the two years of test data available for analysis, it appears that charter schools are not performing very differently from other regular public schools. In examining 1997 and 1998 NCE scores and looking at the gain scores over the two years, very few significant differences occur (p. 40).

The key line here seems to be *that charter schools are not performing very differently from other regular public schools*. However, in a subsequent paragraph the reader is told

> The analysis also revealed that by middle school, the students who attended charter schools for one year or more began to lag behind their regular public school age-mates. By high school, this effect was even more dramatic, with charter school students often 10 to 15 NCE points behind regular public school students at the 1997 testing. This effect may be a function of the program offerings at the middle and high school level charters, a great number of which serve students who have not previously been successful in school. However, analysis of these scores in relation to

> the type of program and student demographics, which (was)beyond the scope of this study, is required before this interpretation can be verified (p. 40).

The quality of students attending charter schools (selection effects) seems to provide a much better explanation for student achievement than program effects (charter or regular school). Yet this was deemed beyond the scope of the study.

This is not the place to debate standardized achievement testing in Arizona. However, the previous studies raise questions concerning the value of student achievement data (SAT 9 or some other measure) for evaluating Career Ladder programs and for making comparisons among teachers, programs, schools, or districts. Seemingly, the data are inconclusive, or can be interpreted in multiple ways, or the data can't be interpreted because of factors outside the scope the study. Perhaps it is an exaggeration to suggest that students are evaluated and measured on the qualities and characteristics they bring to school rather than on what they learn in classrooms. However, this sentiment captures the generally understood reality that the SAT 9 and other standardized tests are better understood as a proxy for family income and socio-economic status than a measure of teacher, program, school, or district quality. This doesn't diminish the importance of good teachers or quality programs; rather it forces us to recognize the limits of current strategies to explain why some students do better on these tests than other students or to attribute results to education-related variables.

To summarize, there is the dual recognition that 1) Career Ladder programs requires teachers to assess and reflect on student achievement, and 2) the interpretation of student achievement as a function only of Career Ladder status and of teacher

effectiveness is too limited. Student achievement outcomes are dependent on many factors, and teacher participation in Career Ladder activities, is only one of these factors.

Section 3 — Conversations with Career Ladder Directors: Research Finding and Guidelines on What to Evaluate in Career Ladder Programs

Summary of General Conversations

In these conversations, five themes emerge from conversations and interviews with Career Ladder directors:

- How Career Ladder programs operate; what are the essential components,
- Why teacher development and teacher professionalism are appropriate yardstick to understand and evaluate Career Ladder programs,
- How student achievement and other outcomes might be considered in an evaluation of program effects,
- Why local control and ability to customize to local needs gives programs their strength, and
- What significance is the Network of Directors and state support for program goals and future directions.

1. How Career Ladder Works — Essential Components

All participating districts have multiple steps and levels on the Career Ladder. By statute, teachers cannot be rewarded by time in grade alone, and there are experiential benchmarks that suggest a career cycle for teachers and expectations of greater contributions with experience. A ladder with three years, five years, and seven years of experience to determine eligibility to a salary level is not uncommon.

Many districts assign all new teachers to Career Ladder participation in their first year of teaching, kind of an *entry phase* or level. Participation rates vary by district though the law requires at least fifty percent teacher participation. First year teachers are considered as participants of the Career Ladder regardless of subsequent participation and most districts do not pay these teachers additional salary. However, Career Ladder funds are used for professional development, induction into the district, and assistance in reaching full participation on the Career Ladder.

Level I is often viewed as a *professional growth* stage as teachers learn and master the preparation and performance skills required for effective teaching. Level II is more of *collaboration* phase with focus on learning from peers and participating with peers. Level III is often viewed a *teacher leadership* stage where exemplary teachers seek out new knowledge, carve out new areas of expertise, and provide curricular and instructional leadership. At higher levels of the Career Ladder, teachers are required to complete more units and to demonstrate more responsibility for instructional monitoring, student outcome assessment, and professional development.

An essential aspect of every district's plan is the focus on teaching and monitoring of student outcomes. One district's Career Ladder plan included four components: 1) teacher evaluation, 2) unannounced teaching evaluation, 3) classroom portfolio of student performance and achievement, 4) professional responsibility (defined in many ways including teacher leadership, policy, outreach, curriculum development, research, teaching a class to peers, etc.). Another district focused on three aspects of Career Ladder: *attention to student outcomes*, *observation and evaluation of teacher performance*, and *plan for professional growth* (approved by principal). The district itself measures student achievement and the school (not just individual teachers) must address school performance.

Another district focused on the alignment of curriculum, instruction, and assessment of students in its Career Ladder levels. Level I is called the *Entry Level* and includes a 10 lesson alignment of curriculum, instruction, and assessment. Level II is the *Resident Level* and Level III (*Career Level*) involves year long documentation of efforts including the most significant student learning, enablers, semester goals, etc. When

students don't reach goals, teachers must document what they've done to assist students reach their goals. The Career Level also includes collegial study groups of three to six teachers who meet to study teaching and learning and develop subject specific rubrics (e.g., math and science).

A third district describes the three levels to its Career Ladder as follows: Level I is a mentoring level with few requirements, usually during a teachers 1st three years of teaching. Levels II and III require higher level of responsibility, staff development, and documentation of student achievement. Blocks of time to measure student achievement are semester or twenty weeks long and teachers submit four reports during the year. Career Ladder teachers meet with the team to discuss: 1) goals, 2) instructional plan for year, 3) student assessments. Documentation is then required and the Career Ladder Evaluation Team scores reviews, with 5 readers for each written document.

Catalina Foothills reports that its number one goal is teacher development. Of the 216 eligible teachers, 70% participate. School restructuring around Career Ladder includes four levels of the Ladder: 1) *Candidacy* - usually in 1st year teacher or newly hired vet and considered to be fairly prescriptive; 2) *Internship* - 2A workshops, 2B collegial, peer coaching, 2C focus on student outcomes. Level II includes things such as staff development and learning the Career Ladder rules, requirements, paperwork. Planning, assessment, higher order thinking skills, and differential instruction part of the three levels of workshops, assessment, cognitive coaching. 3) *Level 3* includes two sub-categories based on enhanced teacher learning or enhanced student learning 3T a,b,c (3ta is teacher leader, research, workshops); 3tb is site mentoring, 3tc is workshops presentation); 3S a,b,c (3sa extends student learning, 3sb is pilot, 3sc is

community/magazine, kindergarten mentor, preschool, field study of erosion by students, projects, and extensions of student work. Additionally, there is a non-evaluative improvement piece that once you are certified/qualified by evaluation team as eligible to participate, it is a way to maximize performance.

Flowing Wells reported that three fourths of its 320 teachers participate in Career Ladder, of which 165 are paid (slightly more than 50% paid with about 25% or 80 teachers in unpaid Induction phase). There are four levels based on teacher development as determined in collaboration with principal. Phase I is *Beginning Teacher Induction*, with 5 pretest/posttests, 7 day workshop on Essential Elements of Instruction, and follow-up mentoring in subsequent years. Level II is the *Placement Phase*, and usually occurs in 3rd year of teaching with written student projects, teacher reflection and write-up, and peer evaluations part of requirements. *Level III* includes a long term class project of at least 12 weeks duration. A combination of profession growth activities such as in-district journal clubs, special projects, committees, carnivals, academic and social activities are included. In this district, the majority of paid teachers are at this level. Level IV, *Advanced and Exemplary* allows teacher to demonstrate instructional mastery and delivery, documentation of student achievement, district/school/department focus. Level IV may include teacher leadership phase in which documentation is reduced but reflection on project planning and outcomes is enhanced.

One district described three goals to the program: (1) reward/retain excellent teachers through a performance based compensation plan; (2) positively impact student achievement as measured by district assessment plan, and (3) promote individual excellence and diversity with choice of evaluation instrument, self-directed learning, and

student growth. At this district, 98% of the staff development classes were taught by Career Ladder teachers.

Another district, which became a Career Ladder district in the 1991/92 year and is seen as teacher driven and administratively supported. Goals are to:

1) Attract and retain quality teachers.
2) Promote professionalism among the staff.
3) Motivate improvement of instructional skills.
4) Increase student academic progress.
5) Increase staff collegiality and sharing.
6) Regard quality and professional performance.
7) Provide leadership opportunities for teachers.

The components of the program are as follows:

1) required professional growth and training,
2) staff development opportunities,
3) higher responsibilities for teachers such as mentoring, committee work, in-service presentation, curriculum designer, etc.
4) enhanced instructional performance as documented by administration and peer evaluations.
5) Student progress project,
6) Additional contract days,
7) Teachers given opportunities to visit other classrooms,
8) Sharing of dialogues

In order to qualify for Career Ladder salary the following year, teachers must have in place a student progress project, required professional growth, higher responsibilities, and production of a teacher portfolio. These are used to determine where teacher places on ladder and if teacher will qualify for monies to be paid the following year. Currently fifty-six of teachers participate (new and experienced). The district provides an extensive twelve days in-service workshops during teachers first two years with the district and also a mentor for every new teacher. Professional development is provided in classroom management and discipline, essential elements of instruction, critical thinking and brain research, student assessment, and an integration of curriculum, instruction, and

assessment. The District pays registration fees for participants to attend out of district seminars, lodging and travel, mini-grants for programs of instruction, artists in residence, etc. Salary addendum is based on Level and points earned from the teacher portfolio. The district also pays peer evaluators for the number and types of evaluations done. Career Ladder participants produces a portfolio which shows what was done in all required components of the program for the particular level they are at. It is scored by five people with high and low scores thrown out and the average of the remaining 3 determine the points earned. Points earned determine the track and multiplier used to figure the addendum to the salary.

A teacher earns the amount of money set by the traditional salary schedule in the district and the performance amount paid from career ladder funds. The participant is issued an addendum contract for the portion of the teacher's salary that comes from the Career Ladder. Depending on the district, this additional money is added to teacher's regular paycheck, or taken in lump sums at the middle or end of the school year.

Average pay incentives differ across districts. Flowing Wells reports that $1200 is given for initial placement, with $2300-5300 at higher level of Ladder, and an additional $2700 for extra duties. Other districts use figure of $500 Base, with $1,000-8,000 for additional professional responsibilities. Another district paid $700 for entry level, 4200-4300 for upper levels, and 600-800 for additional training.

One important ambiguity in how teachers are paid concerns the timing of when teachers are paid for the work they perform. Most districts explained that teachers are being paid for a current level of performance/documentation with entry based on a demonstration of prior level of teacher performance/achievement. Therefore, it is

possible, though rare that a teacher could demonstrate proficiency and then not perform in a subsequent year (and in theory be asked to give money back). Career Ladder directors suggest prior level of achievement simply gives entry point on the Career Ladder which must be carried out in current year. However, the directors report that some teachers still believe that Career Ladder salary addendum is earned in prior year and that regardless of performance in current year, they are due a sum money. This is changing over time.

Teachers and any other certified and/or professional staff (librarians, speech pathologists) may be eligible for Career Ladder monies as long as 50% of their responsibilities contribute to student outcomes, i.e., student achievement. There is also an upward adjustment of funds for small districts (increasing funds available) and a proportional reduction of funds in school districts with less than 100% of schools participating. There is some money that goes for administration of the program, human resource and clerical support, and FTE of peer evaluators and program administrators.

a) Site-Based Incentives Component

Some Career Ladder districts currently embrace site-based incentives in which Career Ladder and non-Career Ladder teachers receive extra salary for a schools (rather than an individuals) performance. With the 1997 change in the law, all the personnel at a particular site may be eligible for career ladder funding (salary addendum) whether they participate in Career Ladder or not. In districts opting for Additional Incentive Component, of the 49% of CL funds being used to support site based goals, at least 85% must be used for salaries and not more than 15% used for planning or staff development. Additional evaluation requirements including repeated parent satisfaction surveys are also part of the additional incentives legislation.

2. Teacher development and teacher professionalism

According to the directors, Career Ladder programs provide ways for teachers to demonstrate proficiency and teacher leadership. These directors agree that Career Ladder must demonstrate educational accountability and not simply be seen as a way give money away. But, the need for accountability data should not be confused with the attempt to nurture and recognize quality teaching and reward professional performance.

Career Ladder programs provide professional development by institutionalizing study groups, providing mentors for teachers, and recognizing and prioritizing student achievement gains. Career Ladder aims at raising teacher awareness of the importance of student outcomes to professional responsibility and professional recognition.

One Career Ladder director suggested while the goal of Career Ladder is to promote broader participation of teachers in sharing knowledge, leadership, and development of strategic plans/standards. There is a sense of teachers becoming more a part of "power structure" that shapes schools/classroom contexts. **Career Ladders is seen as a way to empower teachers and reward teaching.** There is a widely held belief that teacher professionalism diffuses among networks of teachers at a site, and increases growth among all the teachers at that site (and even among all teachers in the district)..

Another director wanted Career Ladder to be seen as highly focused with a strong band of professional support, and not be seen as trendy. Without state-level oversight, Career Ladder monies would be used to support other school or district initiatives separate from the core of education, teaching. Career Ladder supports the view that there is a science of teaching and it provides opportunities for professional growth, peer evaluators/evaluation and ratings of teaching. Career Ladder is the **carrot** that pulls

teachers towards effectiveness by demanding that teachers articulate instructional outcomes and monitor student achievement. Teachers learn to apply rubrics by which it is understood how they will judge/evaluate themselves and outcomes for their students' growth, learning, and development.

Many directors emphasized that Career Ladders is not some add-on, or peripheral program, but over time has moved to the very core of understanding teacher development and the documentation of teacher performance. Documenting teacher performance, instructional success and student outcomes is accomplished through carefully structured (and sometimes bureaucratic/paper rich) mechanisms. Using a functionalist metaphor of the human body, Career Ladder was described as the arteries and veins, and indistinguishable from other school and district (body)functions such as evaluation, staff development, mentoring, curriculum planning, teacher leadership and policy participation, etc.

One director viewed the teacher evaluation component as strength of the program. The program hired four full-time teacher evaluators each with three year terms. These evaluators work with the principal and rate teachers in consensus fashion. There were three levels to the program plus an entry year (Residency) where new teachers were given a mentor. Career Ladder pays for staff development, association dues, and participation in conferences and programs at the state and national levels.

In another district, instructional success and effectiveness was measured by the district evaluation instrument (STEP) and teachers were evaluated by administration and by peer evaluators. Peer evaluators evaluate a videotaped lesson prepared by the teacher or can make an in-class observation.

3. Concern With the Use of Student Achievement Data

Every Career Ladder district addresses student achievement in one form or another in its Career Ladder plan. Some plans ask for student assessments based on performance every nine weeks; other districts assess student achievement over twenty weeks (a semester) or at the end if the year. Some districts use local exams based on teacher developed units of study or shelf exams prepared by publishers to support their textbooks and curriculum series. Other districts rely on SAT 9 exams conducted by the state, to document student performances. And some districts use a combination of assessments.

Student progress is not always a matter of student test scores on local or standardized exams. Rather, student progress means having teachers recognize and plan for effective instruction and reflect on what they might do better or differently, given the circumstances. Student achievement then is combination of student outcomes and attention given by teacher on how best to monitor and then improve student outcomes. Teachers are not so much held accountable for examination results as for how they monitor exam results and the steps they will take to adjust instruction to meet the needs of poorly performing students and continue the efforts of highly performing students.

A caveat is the obvious recognition that student achievement is dependent on many things, including teacher talent. But incentives for students are not part of program, and current assessment programs do little to control for student inputs such as aptitude, motivation, family support, cultural press for youth to achieve in school, prior performance, etc. This creates many dilemmas in recognizing and measuring student achievement, which is part of the problem. This recognition is a two edged sword—used by some outside the profession to argue that teachers are not held accountable and many

are lazy and incompetent; used by insiders to mask their limited commitment and marginal student outcomes.

All districts talked about the measures that they might use to judge the success of the program. All recognize that benefit of the program must be tied to standardized student test scores, such as the SAT 9. But, other indicators such higher attendance, lower absentee rate for students and teachers, teacher participation in curricular and extra-curricular activities. Increasing the status of teachers also an indicator of program success including retention of teachers, improving/clarifying teacher standards, promoting teacher growth, reward on salary schedule, and increased staff unity. The impacts of Career Ladder was seen on student achievement on local district assessments, student dropout and graduation rates, teacher satisfaction and parent satisfaction surveys.

Directors were aware of the limits of standardized tests, which undervalue certain areas of teacher performance and don't even measure some subjects such as PE. Some districts were seen as advantaged or disadvantage by the SES of the community; some recognized the potential advantages and pitfalls if measures of improvement are used rather than absolute measures of performance. Many directors argued that using district examinations rather than the Stanford 9 was a better indicator of what teachers do in classrooms. One district focused on the **specificity** of documenting student performance on local curriculum as separate from the district's ability to aggregate across classes, schools, and the district as a whole. Career Ladder asks teachers to specifically address what they are going to keep track of in order to document performance. Attention to the details of student performance is required to call oneself a good teacher. All agreed that

salary and recruitment makes districts unequal in many ways independent of Career Ladder status of teacher or district.

A few districts talked about how Career Ladder has become more seamless with other district efforts at improving teaching and student achievement. Funds also provide seamless staff development monies and opportunities for outside consultant/staff development.

In one district, scores on Student Achievement Plans are used to document student growth and pretest-posttest measures are used to determine the success of teachers. The Student Achievement Plans are units that are nine to eighteen weeks in duration. They are tied to district curriculum objectives and must pass a rigorous pre-approval with a reading committee made up of teachers from throughout the district. The plans are taught and documentation of student progress is submitted for scoring by the reading committee. Student samples are provided to validate scores. The plans are scored using a four point rubric and teachers' success are rated accordingly.

To summarize this section, the directors recognized that any assessment of student performance which is used to make judgments of teacher, school, and district quality will have inevitable biases in the way the outcomes are judged and interpreted. They also agreed that the state has an obligation to collect and report student achievement data and try to make sense of the data to taxpayers and parents. They urged, however, that the state policymakers not to confuse this effort with assessing Career Ladder programs, which are aimed at retaining quality teachers, improving teacher performance, and increasing student achievement. Judging teachers on how well they attend to students' achievement and performance on state assessments as a measure of Career Ladder

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effectiveness, may therefore be best left to local district plans which consistently ask teachers how they monitor student performances and how they attend to student outcomes.

All the Career Ladder directors said that Career Ladder must be accountable. Yet there have been many problems with prior state efforts. Often, so many variables are considered that nothing is said. State assessments have change over time making causal attributions more difficult. They urge that policymakers do not just look at student test scores but also to look in classrooms. Evaluators must look at district tests and the number and percentage of district objectives mastered by students in Career Ladder teachers' classrooms. And, it is likely that local district assessment plans would show this rather than a statewide program evaluation. This ties in nicely to the next area of discussion.

4. Local Control and the Ability to Customize Programs to Local Needs Gives Career Ladder Strength.

In some directors' views the overall strength of Career Ladder is its flexibility and support for local decisions. Teacher support, budget, network, local control with a common set of statewide standards make for a successful program. Individual programs are tailored to district needs. One director suggested that Career Ladder programs will be very different if they are administratively driven than when they are teacher driven.

Many directors pointed out that Merit Pay is perceived by teachers as extremely divisive whereas Career Ladder is not. According to Firestone (1994) "many teachers view their careers not as progression up the organization hierarchy but as progressive development of the knowledge and skills to do a more effective and consequently, a more satisfying job" (p. 554). Some directors promoted this view of skill-based pay as a way to

support individual experimentation and personal growth. Other directors focused more on collective incentives aspect of Career Ladder and saw their programs proceeding in this direction. One principal suggested that he is in favor of articulating site goals that are valuable and measurable. He feels that the site component rejuvenates Career Ladder and serves as a lever for change. Still other districts focused on the job enlargement aspect of Career Ladder and the opportunities for teachers to voluntarily select new tasks and take on new responsibilities during the school year and during summer months.

Local surveys in one district show 3 main benefits of Career Ladder programs: 1) providing staff development in and out-of-district, 2) teachers visiting other teachers classrooms; district pays for half day sub to support these visits; and 3) sharing of ideas, plans, etc. among teachers at in-services, etc. The staff development in particular provide opportunity for teachers to present ideas to colleagues and to encourage teacher to continue their own education, reading, keeping up with current research, etc. This provides leadership roles for teachers.

Another district suggests that when student use more critical thinking skills, problem solving skills, and working cooperatively with others, these are better indicators of success. They advocate authentic and product assessments and the achievement test type. (They) work to use multiple intelligences in teaching so more students can be reached and/or reached effectively.

Still another district points to how central the Career Ladder program is to the District and how to measure its success/impact. Crane is a year-round school district and the Career Ladder program has assisted in providing between semester classes for students coming from needy families and for students needing remediation or enrichment activities.

In one district, the site incentive component has one goal that is affective. Some of the student outcomes involve community service type activities, which provide the students real-life opportunities to exhibit good citizenship and help the community in which they live. Examples of affective goals that have been used are food drives to assist the local food bank, school beautification projects and activities that involve demonstration of lifeskills such as integrity, perseverance, responsibility, caring, and sense of humor.

Career Ladder directors see grass roots buy-in as key with stakeholders from ground up involved. Career Ladder must be voluntary to get this buy-in. Directors suggest slow goes it, and not to adopt a "sink or swim" mind set, particularly if new districts are ever brought on board.

5. Network Of Support Among Districts

Finally, there was overall support for the **network** of districts who participate (and participated in meetings). They learn from one another. On-going support from state and re-application process forces CL Advisory Committee top address many of these issues. Career Ladder directors view their network as an important source of uniqueness and commonality of programs. This network provides opportunity to share information, state requirements, etc. The directors did not see their network as contributing to institutional isomorphism, or programs becoming more alike over time. Rather, they felt the network positives far outweighed any potential conformity or reduction in uniqueness.

Section 4 — Evaluation Recommendations

1. Student Achievement

Recommendation #1 - Time-Series Design — The first recommendation is to examine student achievement in Career Ladder districts using a **time series design.** The time series design examines how performance on selected variables have changed over time. For example, if one wanted to look at the effect of seat belt laws on traffic fatalities in the U.S., one would look at traffic fatalities in states during the three years prior to and three years after seat belt laws had been enacted. To further control for population growth (and an increase in the number of drivers) one could include in the analysis selected states which had similar population growth but no seat belt laws to states in a **multiple group time-series design**.

Relating to Career Ladder programs, if student achievement scores are generally unchanged over time, or continue in the same direction before and after program implementation, one is less likely to attribute Career Ladder as the cause. However, if there were a change in the direction and slope of student achievement scores after Career Ladder programs were implemented, this would support an interpretation that the Career Ladder program contributed to the change in student performance.

Recommendation one is to examine six years of student achievement data in each of the participating districts, three years prior to Career Ladder implementation and three years after implementation. This should provide a long enough period of time to discern program effects. The dependent variable to be compared would depend on the availability of data in Department of Education databases. For districts in which SAT-9 battery tests were available, scores at the district level, school level, and grade level in reading,

language, and math would be compared prior to and after Career Ladder implementation. Where ITBS scores were available, percentiles in reading, language, and math at the district, school, and grade level would be compared. For the comparisons in which there had been change in the state's testing program (or in the norming of the test), there would have to be an adjustment of the dependent variable to account for these changes. Since all school districts in the state were impacted by these changes, it would be fairly routine adjust scores based on a common factor. It might also be useful to select comparison districts, which had experienced the same changes in state's student testing program without Career Ladder programs, for a **multiple group time-series design**.

The advantage of the time series-design is that it compares a district to itself, to its own performance before and after a program has been implemented. The data analysis for the time-series design should also include weighting of scores closest to the date of Career Ladder implementation. In other words, test scores in the year immediately preceding and immediately following Career Ladder implementation would be weighted higher than test scores in year two (before and after) and year three (before and after).

A second step is recommended in which a time-series study be conducted in the districts that have received funds under the *Additional Incentives Component* of the Career Ladder legislation. This would compare the student achievement scores at a school site before and after receiving site based incentive monies. Since this legislation is fairly recent, all the schools and districts involved would have SAT-9 data available. It may be necessary, however, to wait another year until six years of data (three years before and three years after implementation) are available.

Finally, for any district that has opted out of Career Ladder, an **interrupted time series design** should be conducted. This would show student achievement before program implementation, during program participation, and after participation has ended. A simple graph would show movement of student test scores over this time period of time.

Recommendation #2 -Caution for the Use of Value-Added Assessment — At this point, it appears that the state will be moving in the direction of value added assessment. The idea of value added assessment is to be able to show the independent effects of teachers, schools, and districts on student achievement. Independent of the effects of family background and socio-economic status, value-added assessment argues that a student is expected to make progress during a given school year. If one could show the extent to which student gains (or lack of gains) were attributed to a teacher and school, then a system could be put into place which targeted high achieving and low achieving teachers and schools (and districts) for rewards, extra help, or sanctions.

There are many questions concerning feasibility, usefulness, and interpretation of the results of value added assessments. It would not be difficult however, to add Career Ladder status of teacher, school, and district to the mix of data which would be collected if value added assessment is implemented in Arizona. Whether the effort to implement value added assessment will include the Career Ladder status of the teacher, school, and district is undecided at this point. However, the goal would be to show that students in Career Ladder districts make greater yearly gains in achievement than students in non-Career Ladder districts. If these gains were present, it would help to make a stronger case for the additional funding that goes to Career Ladder school districts.

There are a few caveats if value-added assessment is implemented in Arizona and used to judge the performance of Career Ladder teachers, schools, and districts. First, the psychometric properties of examinations raise the specter of ceiling effects or threshold effects which work against higher achievers showing gains to the extent that lower achievers are able to show gains. It may require a very different effort to increase one's achievement from 50th percentile to the 70th percentile than from the 79th percentile to the 99th percentile.

Second, few evaluation and measurement experts would advocate measuring teacher quality or teacher effectiveness on the basis of student test scores alone. There seem to be many variables that affect student outcomes, some of which are more under the control of teachers and schools than others. Students are not passive raw material waiting to be molded or carved. They actively contribute (and resist) their educational experiences.

Third, depending on the statistical model chosen, some districts and schools will inevitably be seen performing better or worse than expected. Sandra Horn, writing for William Sanders, director of the Tennessee Value-Added Assessment System alludes to this in her posting to EDPOLYAN (1995):

> …the state-wide analysis clearly shows that the group of students in Tennessee which are not making as much gain in most of our systems is NOT the low achieving students. Rather it is the HIGH achieving students … In fact most of the concerns that we have received have come from teachers, principals, etc. within systems and schools with a disproportionate number of high achieving students. In fact, many educators who are working with populations of students with lower achievement (and lower abilities) have expressed to me that they are delighted with TVAAS because for the first time there is some documentation for the public to see that their students are making creditable progress (EDPOLYAN, 1995, pp. 104-105).

This suggests that the procedures used by the Tennessee Value-Added Assessment System enhances the opportunity for lower achieving schools and districts to show achievement gains. If the Tennessee experience holds true for Arizona, lower performing districts will be seen as making more progress than high achieving school districts.

How does this affect Career Ladder evaluation? Using Behrens (1997) adjusted ranking of Arizona School Districts by at-risk status, (combination of free and reduced lunch, mobility, etc.) it could be argued that Career Ladder districts are more often the higher SES and higher achieving schools and districts (e.g., Kyrene, Scottsdale, Mesa, Litchfield, Flagstaff, Catalina Foothills, Cave Creek). The same is true in Sloat (1994) in which the majority of Career Ladder districts studied were not at-risk districts (nine of the fourteen districts analyzed were considered not at-risk). If the achievement gains in Career Ladder districts are found to be less than in other, lower achieving districts, does it indicate an absence of program (Career Ladder) effects? Or is it indicative of the more general education trend over the past twenty years, in which the gap between higher and lower achieving students has been reduced. By focusing attention on the smaller gains of higher achieving students (as Sandra Horn does) it will provide a great deal of ammunition to those who already feel that schools spend too much energy and resources on the lower achieving students. This damages public schools generally and Career Ladder districts specifically, to they extent that they are part of the band of higher performing school districts.

2. Teacher Professionalism

Evaluating Teacher Professionalism: A Rationale

If exemplary teachers are associated with Career Ladder programs, then it would be useful to follow Scriven's (1976; 1993) *modus operandi* evaluation to see the actual chain of events in which teachers and students are positively impacted as a result of participating in Career Ladder programs. Scriven (1976) argues that in designing any study, it is worthwhile to devote time to the questions: "What is the means whereby the putative cause is supposed by bringing about the effect? What are the links in the causal chain between them? Can we look for these links or arrange that they will be easy to look for? Can we use their occurrence to distinguish between alternative causal hypotheses? How?" (1976, p. 117).

Career Ladder directors also propose that to understand and evaluate Career Ladder programs, one must look at multiple aspects of teacher professionalism in Career Ladder districts. This theme is expanded by Talbert and McLaughlin (1994) who review of teacher professionalism in the everyday contexts of schooling. They argue that "teachers' professionalism, considered in terms of generic criteria for professional work and authority, is highly variable and contingent upon the strength and character of local teacher community" (p. 124). They explain:

> This claim rests, in part, on the assumption that colleagues are potentially important sources of work norms and sanctions when official or internalized standards for practice are weak or inconsistent... Privacy norms characteristic of the profession undermine capacity teacher learning and sustained professional commitment... Conversely, teacher communities that promote collegial discourse and collaboration set condition for share professional standards to emerge and be enforced. (p. 124)

Talbert and McLaughlin (1994) point out that "strong teacher communities foster professionalism—a common knowledge base or technical culture, commitment to meeting the needs of all students and durable professional identities and commitments. Conversely, without opportunities to acquire new knowledge, to reflect on practice, and to share successes and failures with colleagues, teachers are not likely to develop a sense of professional control and responsibility (p. 130). As others have suggested, schools must be learning communities for teachers as well as students. This challenge leads to the third recommendation for evaluating Career Ladder, a survey of teacher community and teacher professionalism. Additional rationale for this point of view is presented in Appendix D.

Recommendation #3 - Evaluate Teacher Professionalism

To make the claim that Career Ladder programs result in better teachers and better teaching, the mechanisms by which this occurs need to be examined. The third evaluation recommendation proposes the Arizona Department of Education measure **teacher professionalism** in Career Ladder and non-Career Ladder districts. The recommendation aims at measuring the relationship among: 1) being part of an active teacher community, 2) level of collaboration and mutual support for innovation among colleagues, and 3) teacher professionalism.

Measures

A survey would be developed using constructs from the Talbert and McLaughlin study (1994, p. 134; see Appendix C for actual questions). The survey would include Career Ladder status, and three measures of teacher professionalism: 1) technical culture, 2) service ethic, and 3) professional commitment.

According to Talbert and McLaughlin's definitions (p. 134)

Technical culture refers to shared standards for curriculum, subject instruction, relationships with students and school goals,

Service ethic includes two dimensions a) *caring for students* — a sense of responsibility and caring for all students as individuals — and, b) *expectations for students' success*—the opposite of the belief that some students are not capable of learning the subject matter and lowered expectation)

Professional commitment is a commitment to teaching, the subject matter, and continued professional growth.

These dimensions of professionalism would be represented by multiple items in a survey to be distributed concurrently with the Arizona Career Ladder Program Survey. Control variables would include job satisfaction and personal characteristics (gender, age, degree, and subject area).

Alpha coefficients for each scale (for the multiple items to be developed) would be computed, indicating the internal consistency of scale items. Some of the items would be replicated from the High School and Beyond 1984 Administrator and Teacher Survey (ATS) or from the National Educational Longitudinal Survey First Follow-Up Teacher Survey (NELS:88 First Follow-Up) as was done in Talbert and McLaughlin (1994) study.

This survey would then be distributed to teachers in Career Ladder and non-Career Ladder districts. Statistical analysis would be accomplished to measure teacher professionalism and differences at district and school levels. A regression analyses would be used to control for job satisfaction and personal characteristics and to help rule out the possibilities that any relationships were due to survey response bias or teacher selection effects.

Recommendation #4 – Ask Teachers to Name the Best Teachers at Their Schools

The rationale for Recommendation #4 comes from the suggestion that Career Ladder results in a large numbers of high quality teachers in the classroom. It is also

aimed at ruling out the alternative that the best teachers in schools are not part of the Career Ladder programs.

The evaluation question is straightforward. Ask teachers in Career Ladder districts to name the **five best teachers** at their school. This would be best accomplished as part of other survey information with respondents being ask to write the actual names of teachers or to simply check them from list of names. Next, determine if the named teachers participate in Career Ladder and at what level. The overlap would provide an indication of the extent to which Career Ladder participation matches identification as a best teacher in that school. If only half of the named teachers in the school were Career Ladder teachers this not be very encouraging. If ninety percent of the named teachers were Career Ladder teachers, it would be quite encouraging to think that nine out of ten teachers named participated in Career Ladder programs.

Recommendation #5 — Narratives of Exemplary Career Ladder Teachers

Stories provide an opportunity to look in greater detail at the lives and experiences of a few teachers, rather than to generalize to every teacher or district. Stories capture richer detail and the more covert knowledge from which it is possible to examine teachers and teaching practice.

This evaluation section would collect and write the stories of a small number of exemplary Career Ladder teachers. It would help address of what contributes to exemplary teachers remaining in the classroom (one of the stated goals of Career Ladder legislation). Teacher participants would be recruited and selected on the basis of the uniqueness or distinctness of their stories and their experiences. Each Career Ladder district could nominate one or two teachers. A determination would be made concerning

which participants would be most suitable to the project. A set of preliminary questions and probes would be prepared and interviews set up.

Initial contacts would probe family background, biographical information, and later educational experiences. Subsequent interviews would focus on specific examples of teaching practice and problem solving strategies with connections to Career Ladder programs and assessments.

These interviews would be transformed into stories of exemplary teachers and teaching with focus on Career Ladder participation.. Stories would be approximately 2500-5000 words, divided into sections reflecting the narrative structure of effective stories. Each story will conclude with a reflection on past actions by the story tellers. The evaluation of all the stories will include an analysis of important themes raised by the stories as a group.

3. Evaluating District Compensation Plans

Recommendation #6 - Evaluation of District Compensation Plans

One criticism of Career Ladder programs is that they are repackaged monies (same money but in a different form). To address this question, it is recommended that ADE compare district salary schedules of Career Ladder and non-Career Ladder districts over the ten year period 1988 to 1998. By looking at base salary, mid-career salary, and maximum salary in Career Ladder and non-Career Ladder districts, a growth rate in salary schedule could be established. The data could answer the question whether Career Ladder funds are the same funds repackaged in a new form or whether they represent a new and additional monies for teacher salaries (see Firestone, 1994). The analysis could also

determine any differences between districts adopting the Added Incentives Component from other Career Ladder districts and from non-Career Ladder districts.

Summary

The goal of the final section was to provide detailed evaluation recommendations to the Arizona Department of Education. The section points to evaluation strategies in three major areas: student achievement, teacher professionalism, and district compensation. The following evaluation recommendations are proposed:

Student Achievement

Recommendation #1 — Time-series design on student achievement in Career Ladder districts.

Recommendation #2 — Caution in the use and interpretation of value-added assessments for Career Ladder comparisons.

Teacher Professionalism

Recommendation #3 — Survey of Teacher Professionalism in Career Ladder districts.

Recommendation #4 — Nominations of best teachers in Career Ladder schools.

Recommendation #5 — Narratives of exemplary Career Ladder teachers.

District Compensation Plans

Recommendation #6 — Evaluation of district compensation plans

These recommendations can be implemented immediately or phased in over the next two to three years, with priority given to teacher professionalism in Year One, student achievement in Year Two and district compensation in Year three.

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Section 6 — Appendices

Appendix A: Interview Protocol for Career Ladder Directors

Hello. My name is Arnold Danzig. I'm a consultant with the Arizona Department of Education. I've been asked to contact you regarding Career Ladders programs in Arizona. The state Department of Education provided me with your name as the contact regarding Career Ladders in your district. Here are the questions that I would like to use as a starting point for our meetings.

General Description

1) Please tell me a little about the Career Ladders program in your district.
A) What are a few of the goals and objectives of the program in your district?
B) What are some of the different components of the program in your district?
C) What aspects/characteristics of the Career Ladder program do you think are most essential to understanding the program in your district?

2) What % and how many teachers participate in Career Ladders in your district?
A) Do you include new hires in this pool? If yes, how are they considered?
B) How do you consider itinerant specialists such as counselors, SLPs, PT/OTs, school psychologists, etc.?
C) How much leeway is there to consider non-certified personnel for Career Ladders incentives?

3) When did the program begin? How long has it been in operation?
A) Why/how did the District get involved?
B) Was there a key person who contributed to the program from the beginning or played an instrumental role in its development?

4) What kinds of professional development activities are parts of the Career Ladder program?

5) What kinds of incentives (remuneration, symbolic, cultural) are provided to Career Ladder participants?

A) How are steps determined for teacher/participant remuneration?
B) At what time(s) of the year are monies given to Career Ladder participants?
C) Are there any sanctions for non-participation?

6) What kinds of evidence are used to document instructional success or effectiveness?

7) If you were asked to provide advice to another district on how best to implement a Career Ladders program, what advice would you give?

Resources - Leveraged (Time, Money, People, Materials)

8) Has the District spent a lot of additional time on developing, overseeing, working with Career Ladders? How much time?

A) On a scale of 1 to 4, with 1 being a relatively low investment of additional time to 4 being a high investment of time, how would you rate this additional investment of time?

9) Has the District spent a lot of additional money on developing, overseeing, working with Career Ladders? How much money?

A) On a scale of 1 to 4, with 1 being a relatively low investment of additional money to 4 being a high investment of money, how would you rate this additional investment of money?

10) On a scale of 1 to 4, with 1 being relatively easy to 4 being relatively hard, how easy do *you* think this program would be to replicate *anywhere* in Arizona?

Benefits (Value Added Benefits)

11) What are the greatest benefits to the district resulting from Career Ladders participation? to individual schools?

12) What are the greatest benefits to teachers? to students?

Evaluation Component (Evidence of Success)

13) What aspects of the Career Ladders program in your district would you cite as indications or evidence of success (or failure)?

A) What indicators of success would you point out to an internal audience of educators (teachers and school administrators)?

B) What indicators of success would you point out to a lay audience (public officials, community members, and parents)?

14) How do you define and evaluate teacher success in Career Ladders in your district?

15) In what ways do you use student outcomes to evaluate the success of teachers in Career Ladders?

A) Which student outcomes (if any) are used to measure success?

B) What additional student outcomes (if any) would you propose be used to indicate teacher success?

16) What additional criteria would you propose be used to judge the success of the Career Ladders program in your district and across the state?

17) Is there anything else you would like to say about Career Ladders that we haven't discussed?

Thank you for your time.

Appendix B: List of Participants in Individual and Group Interviewees

East Valley Meeting on April 22, 1999
Nancy Fiandach, Mesa
Suzanne Rounsefell, Mesa
Bill Lawson, Payson
Melinda Romero, Chandler
Theresa Sweeney, Kyrene
Nancy Branch, Kyrene
Suzanne Armstrong, Scottsdale

West Valley Meeting
Grace Kobojek, Peoria
Nikki Wheatley, Peoria
Jim Brown, Flagstaff
Jan Amator, Dysart
Karla Gable, Litchfield
Mary Goita, Pendergast
Sheri Heilman, Show Low
Sheryl Cortez, Tolleson

Tucson Area Meeting on April 28, 1999
Cheryl Siqueiros, Sunnyside
Nancy Kelley, Sunnyside
Jean Sherrett, Santa Cruz
Betty Craig, Amphitheater
Jeanette Bogan, Catalina Foothills
Edna Nehrmeyer, Flowing Wells

Other Conversations (Face-to-Face, Telephone, and Written Responses)

Roy Sandoval, Advisory Committee
Virginia Guy, Advisory Committee
Thomas Heck, Advisory Committee
Melinda Bernal, Advisory Committee
Kathy Stehr, Advisory Committee
AnnJi Craig-Wooten, Safford
Linda Hedges, Safford
Candy Murray, Crane
Denise Ryan, Tanque Verde
David Garcia, ADE
Charles Wiley, ADE

Appendix C: Teacher Community and Teacher Professionalism Scales (Adapted from Talbert and McLaughlin, 1994)

I. TEACHER COMMUNITY

A. Teacher community index

Please indicate how strongly you agree or disagree with each of the following statements regarding your current feelings about teaching in general and your present job.

1) I feel that I have many opportunities to learn new things in my present job.
2) I feel supported by colleagues to try out new ideas.

Using the scale provided, please indicate the extent to which you agree or disagree with each of the following statements about working conditions in your school.

1) In this school we solve problems, we don't just talk about them.
2) My job provides me continuing professional stimulation and growth.
3) The staff seldom evaluates its programs and activities (reverse coded).
4) In this school, I am encouraged to experiment with my teaching.
5) Teachers in this school are constantly learning and seeking new ideas.
6) The principal is interested in innovations and new ideas.

II. PROFESSIONALISM VARIABLES

A. Technical culture

To what extent does each of the following statement describe relationships among the teachers in *your primary subject area* in this school?

7) When have very different ideas about what we should emphasize in the curriculum (reverse coded).
8) We have little idea of each other's teaching goals and classroom practices (reverse coded).
9) There is little disagreement about what should be taught in our subject area.
10) There is a lot of disagreement among us about how to teach the subject (reverse coded).
11) We share views of students and how to relate to them.

Using the scale provided, please indicate the extent to which you agree or disagree with each of the following statements:

12) Most of my colleagues share my beliefs and values about what the central mission of the school should be.

B. Service ethic

1. Caring for students

The statements below concern goals for educational outcomes and for relationships with students. Please indicate how strongly you agree or disagree with each statement as it applies to your own teaching philosophy and practice.

13) I try very hard to show my students that I care about them.
14) I feel that I should be accessible to students even if it means meeting with them before or after school, during my prep or free period, etc.
15) It is important for me that my student enjoy learning and become independent learners.

On the scale below, indicate the extent to which you agree or disagree with each of the following statements.

16) If I try really hard, I can get through to even the most difficult or unmotivated students.
17) I feel that it's part of my responsibility to keep students from dropping out of school.
18) I am certain I am making a difference in the lives of my students.

B2. High expectations for student achievement

Now consider each of the statements below concerning instruction in your subject area. Indicate the extent to which agree or disagree with each statement.

19) No matter how hard they try, some students will not be able to learn aspects of my subject matter (reverse coded).

The statements below concern goals for educational outcomes and for relationships with students. Please indicate how strongly you agree or disagree with each statement *as it apples to your own teaching philosophy and practice.*

20) My expectations about how much students should learn are not as high as they used to be (reverse coded).
21) Students who work hard and do well deserve more of my time than those who do not (reverse coded).

On the scale below, indicate the extent to which you agree or disagree with each of the following statements:

22) There is really very little I can do to ensure that most of my student achieve at a high level (reverse coded).

Indicate how much you agree or disagree with each of the these statements about students in your classes this year.

23) The attitudes and habits students bring to my classes greatly reduce their chances for academic success (reverse coded).
24) Most of the students I teach are not capable of learning the material I should be teaching them (reverse coded).

C. Professional Commitment

Please indicate how strong you agree or disagree with each of the following statements regarding your current feelings about teaching in general and your present job.

25) I am willing to put in a great deal of effort beyond that usually expected of teachers.
26) I feel that I am improving each year as a teacher.
27) I don't seem to have as much enthusiasm now as I did when I began teaching (reverse coded).

28) I really love the subject I teach most frequently.
29) I am always eager to hear about ways to improve my teaching.
30) I feel loyalty to the teaching profession (reverse coded).

III. JOB SATISFACTION (CONTROL VARIABLE)

A. Job Satisfaction Index

31. How much of the time do you feel satisfied with your job in this school?
a) Almost never
b) Some of the time
c) Most of the time
d) All the time

Using the scale provided, please indicate the extent to which you agree or disagree with the following statement:

32. I usually look forward to each working day at this school.

Appendix D: Further Rationale for Measuring Teacher Professionalism

In an essay titled "Duties of the teacher", Scriven (1993) writes:

> Great teachers change the world in two ways. Great teachers of the past have inspired individuals—and sometimes whole societies— to new and better forms of life, to great inventions, to the savings of lives, cultures, and countries (and to their destruction), to notable discoveries and spiritual revolutions… But the more common role for teachers is the empowering role…Empower is not just matters of cognitive transfer but of a change in the interests and motivation of students. Teachers usually have a good sense of this, one of the great riches of the role, but it is not sufficiently stressed in analytical discussion of teaching and how teaching should be improved and evaluated (pp. 1-2).

In outlining the duties of the teacher, Scriven argues against both evaluating teaching style and massive outcome assessments. "One does not evaluate anything worthwhile against (teaching style) except stylishness. Nor is the alternative a massive effort to use outcome-based evaluation with state assessment results as the dependent variable, as in Tennessee… An outcomes-*only* approach is not defensible, since the teacher has other duties besides imparting learning" (p. 13).

Scriven's outline of Duties of the Teacher includes five basic areas: 1) knowledge of subject matter; 2) instructional competence, 3) assessment competence, and 4) professionalism, and 5) other duties to the school and community. While there are many systems in pre-service and in-service teacher training for the first three areas, the focus of this evaluation will be to focus on the fourth area: (1) teacher professionalism.

Scriven's (1993) outline of the components of teacher professionalism includes the following areas:

A. Professional ethics
B. Professional attitude
C. Professional development
D. Service to the profession
    i. Knowledge about the profession

ii. Helping beginners and peers
iii. Works for professional organizations
iv. Research on teaching (including contributions to the knowledge base of the profession;

E. Knowledge of Duties
F. Knowledge of the school and its context

Professional ethics include knowledge of and performance in accordance to the ethical standards that are appropriate to the profession. Examples include respecting confidentiality, avoiding favoritism, not presenting oneself as representing school's viewpoint ensuring cheating doesn't occur, avoiding "teaching to the test and other test invalidation such as requesting less able students stay home on test days. Following orders and regulations, as long as not an excuse for unprofessional or unethical conduct.

Professional attitudes looks at the teachers value on the well-being of each student and students in general, and on successful, sustained, and valuable learning by each and all of them." Professional attitude refers to reaction to valid criticism constructively rather than defensively and the ability to solicit evaluation of various aspects of job performance from time to time, including student evaluations; should be ability to integrate these into an overall evaluation of is or her own overall performance and role in the school and community context. Must be helpful to parents, peers, community, an administration with respect to legitimate requests and co-operative projects; helpful to teacher aides; deal with in a courteous fashion and be appropriate role model for peers and trainees as well as students. Must not only avoid prejudices but to positive steps o counteract such prejudices where feasible; must be punctual and otherwise conscientious in performance of duties including attendance at scheduled meetings. Should minimize any penalties for students arising from collective or personal disputes amongst the staff; should be flexible in dealing with the inevitable changes in school organization and policies, curriculum content, and

pedagogy that will occur during their career. Note leadership skills not part of duties, nor good at working in groups unless these are specific to work done by teachers. Counseling and pastoral care skills appropriate for some jobs and not for others. It is unprofessional for untrained teachers to mess with psychological counseling they have no skills with. Duty of care includes caring about students, trying to avoid causing severe stress, and trying to ameliorate it when it does occur. Professional distancing also needed or else stress is intolerable.

Professional development based on assessment of strengths and weakness (arising from system evaluation) should occur. Working towards advance degree, improvement in time and stress management, attendance at conferences and conventions, electronic forum participation, set forth in professional portfolio.

Service to profession includes knowledge of the profession including nature, role, history, current problems, issues. Providing systematic as well as informal assistance to beginner and student teacher is also essential part of service.

Work for professional organization including newsletter, journal, organizing a study group, making seminar or annual meeting arrangement, or working for a union or professional subject matter association all examples.

Research on teaching includes contributing to the knowledge base from which the profession draws its skills and expertise. Though more done by researchers, it is important part of teacher professionalism.

Knowledge of duties include knowledge of the law and regulations applying to teachers and schools in district, state, and nation.

Finally, knowledge of the school and its context includes an understanding of the special characteristics, background, and ideology of the school, its staff and students, and its environment (the community and the natural environment). Knowledge of context should include a good understanding of how the particular educational institution is managed, how it is influence— by what and whom, and how quickly or slowly— and in particular how the individual teacher and the teachers' professional or bargaining organizations can or cannot influence its workings.

Talbert and McLaughlin (1994) then address two empirical issues. First, to what extent do particular local contexts—sector, district, school, and subject area departments—matter for teacher professionalism? Second, to what extent is teacher professionalism socially constructed within school communities? (or is the level of collegial interaction and support in a school context related to indicators of teacher professionalism, adjusting for teacher background differences?)

Sector differences refer to workplace differences associated with teaching in public or private schools. These find expression primarily in terms of mission, values, and autonomy (see Morrison Charter School Report in Arizona Schools).

Talbert and McLaughlin (1994) point out that *district differences* refer to the type and amount of resources available to education, in the expectations of the community for its schools, and in the organizational arrangements that support school administration and management. "The messages conveyed to teachers about their professional status, purpose, and value by district conditions such as committee structures, professional development opportunities, and governance play a prominent role in framing teachers' work lives (p. 129). Talbert and McLaughlin suggest that the extent of loyalty to the

district, the pride or hostility teachers feel about the district is related into teacher sense of professional worth and sense of belonging to a community of teachers.

Important differences are also found at the school level and within high schools, at the department level. Finally, *teacher networks* are yet another context for professional community and one that can significantly affect teachers' work lives. Networks can provide opportunity and support for innovation and change, as well as opportunities for teacher leadership. Networks engage teachers in discourse about the technology of teaching, exposing them to new content and conceptions of pedagogy and providing the supportive context essential to serious change. These networks, outside the school context, may be the only strong professional community for teachers working in schools or departments with limited collegial interaction.